August 2004

Air Program

Digital Opacity Compliance System (DOCS)

Alternative to Method 9 for measuring opacity

Fort Hood is currently participating in a one-year digital imaging regulatory pilot test led by the Air Program at Hill Air Force Base in Utah, University of Utah, Environmental Protection Agency and the Texas Commission on Environmental Quality (TCEQ). The test is an alternative method for measuring opacity. Instead of solely using Method 9 at a point source, a digital camera will be used in conjunction in order to evaluate the plume. After six months of using both methods, it is anticipated that opacity measurements will take place using the digital camera. The entire camera system is referred to as Digital Opacity Compliance System (DOCS). Future uses for DOCS may include measuring fugitive emissions.

Public Outreach

Through a Fort Worth District Corps of Engineers contract, the air program obtained a public outreach tool intended to be used by the surrounding community—especially elementary age school children. This is a CD that teaches the public about air issues and concerns pertaining to Fort Hood and to the surrounding area. It also informs the public of our sustainability goals.

Air Projects:

- DOCS
- Public Outreach– Kit the Kite
- PTE Survey
- Halon Recovery
- Vapor Recovery
- NESHAP
- FORSCOM Dust Study

Potential to Emit (PTE) Survey

Inventory of all sources on Fort Hood that have the potential to emit air pollutants

This survey was conducted with the help of a contractor in October 2003 on Fort Hood. The survey included each and every potential air-emitting source on the installation. Universal Transverse Mercator (UTM) coordinates and a digital photo accompanied each source. A final report is pending, and upon completion it will inform us of our overall potential to emit status. This will generate a baseline for developing sustainability projects to reduce Fort Hood's impact on regional air quality. It will also help us determine whether or not Fort Hood could achieve synthetic minor status.

VOC Recovery Project

Includes biofilter and activated carbon recovery methods

A Directorate of Logistics spray booth has been selected as the test site for several emissions control projects. These projects are being conducted by U. S. Army Corps of Engineers' Engineer Research & Development Center. The mobile zone system includes a recuperative thermal oxidizer to destroy VOCs that are created in painting process. Two other demonstration projects that are being conducted at this facility include an activated carbon fiber cloth vapor recovery system and biofiltration system.

The adsorption technology uses activated carbon fibers instead of activated carbon to absorb organic vapors. This allows the recovery of the organics through electrothermal regeneration. The recovered organics can then be reused. The other project includes the installation of a biofiltration system. The biofilter contains biofilms, which feed off the VOCs created in the painting process. The objective of this project is to demonstrate efficiency and effectiveness of this treatment method on VOCs.

Halon Recovery

A Department of Defense and FORSCOM-sponsored pilot project allowed Fort Hood to remove all Halon 1301 fire suppression systems from fixed facilities. All halon was returned to Ozone Depleting Substance reserve. These systems were replaced with pre-action water sprinkler systems in most facilities. This fulfills part of the Fort Hood's requirement to establish an Ozone Depleting Chemical (ODC) elimination program. Fort Hood has also been successful in turning in and replacing all equipment containing Class I ODCs with more viable alternatives. This includes the removal of over 29,000 pounds of Halon 1301 from facilities, which was returned to the Ozone Depleting Substance reserve and the replacement of 13,412 tons of air conditioning capacity. Flight-line extinguishers are being replaced by cold air compressed foam-type extinguishers.

Dust Study

Fort Hood is participating in a FORSCOM-sponsored dust study through the Department of Energy's Pacific Northwest National Laboratories (PNNL). This research project is being conducted on our training lands to determine the amount of Particulate Matter (PM) generated during training exercises and from off-post sources. Completion date for this project is December 2005.

NESHAP

National Emission Standards for Hazardous Air Pollutants (NESHAP)

A complete and comprehensive Aerospace NESHAPs audit of facilities potentially subject to the requirements was conducted in FY03 to ensure compliance. The survey involved visiting each affected operation/facility, inspection of paint and solvent storage lockers, and interviews with shop level and responsible personnel. A final report was delivered to Fort Hood which includes a NESHAP Compliance Plan. This plan recommends compliance strategies, and includes inspection checklists to assist on-site personnel with compliance issues. A similar audit is planned for newly promulgated NESHAPs in FY04.

Robert Kennedy, Air Program Manager
E-Mail: Robert.Kennedy@us.army.mil Phone: (254) 287-8714